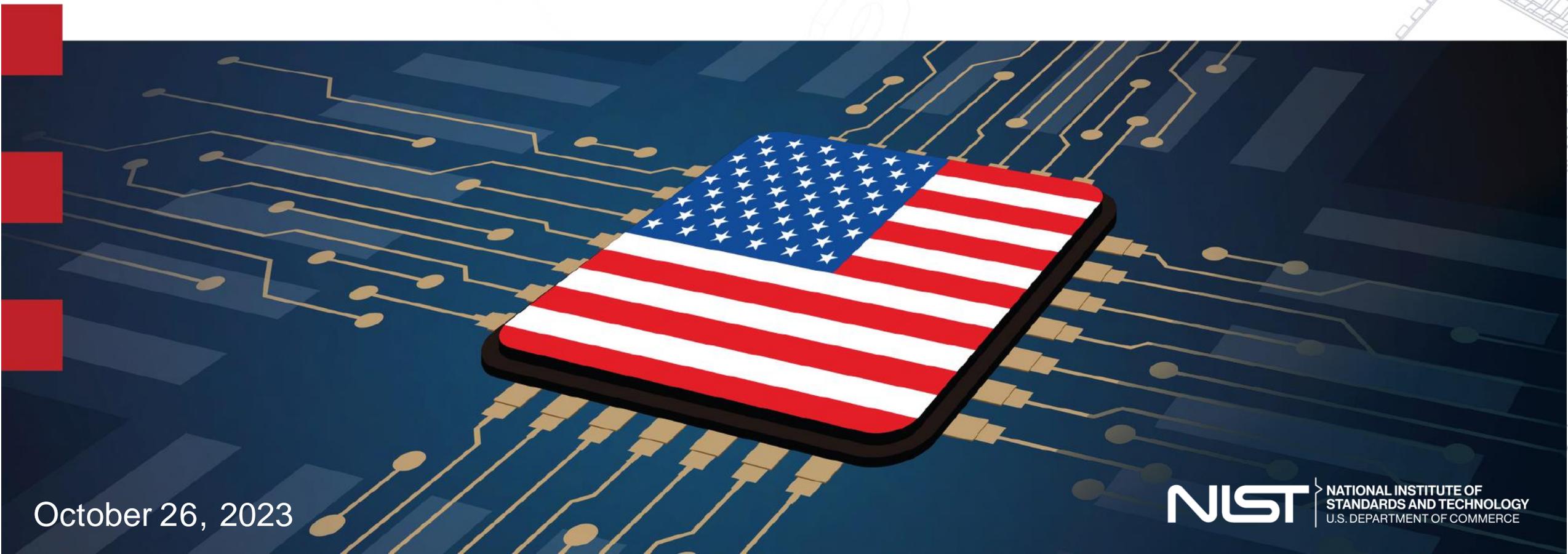
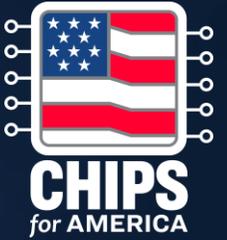


CHIPS: The Intersection with States

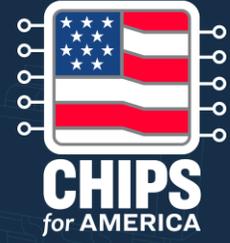
State Economic Development Executives Network (SEDE)



October 26, 2023



Background: CHIPS and Science Act



One Hundred Seventeenth Congress of the United States of America

AT THE SECOND SESSION

*Begun and held at the City of Washington on Monday,
the third day of January, two thousand and twenty-two*

An Act

Making appropriations for Legislative Branch for the fiscal year ending September 30, 2022, and for other purposes.

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

SECTION 1. TABLE OF CONTENTS.

The table of contents for this Act is as follows:

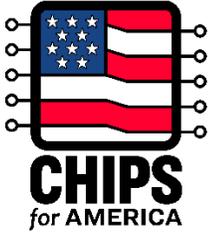
- Sec. 1. Table of contents.
- Sec. 2. References.

DIVISION A—CHIPS ACT OF 2022

- Sec. 101. Short title.
- Sec. 102. Creating helpful incentives to produce semiconductors (CHIPS) for America fund.
- Sec. 103. Semiconductor incentives.
- Sec. 104. Opportunity and inclusion.
- Sec. 105. Additional GAO reporting requirements.
- Sec. 106. Appropriations for wireless supply chain innovation.
- Sec. 107. Advanced manufacturing investment credit.

The CHIPS and Science Act of 2022

CHIPS for America Programs



\$39 billion for manufacturing

Components:

1. Attract large-scale investments in advanced technologies such as leading-edge logic and memory
2. Incentivize expansion of manufacturing capacity for mature and other types of semiconductors

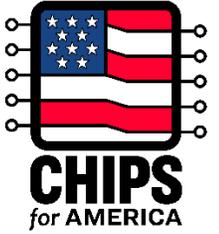
\$11 billion for R&D

- National Semiconductor Technology Center
- National Advanced Packaging Manufacturing Program
- Manufacturing USA institute(s)
- National Institute of Standards and Technology measurement science

Together with
CHIPS
initiatives from
other agencies,
including DOD,
State, NSF,
and Treasury



CHIPS for America Vision



Economic Security

This act enables us to build more resilient supply chains for important components.



National Security

This act enables us to bring the most sophisticated technologies back to the U.S.

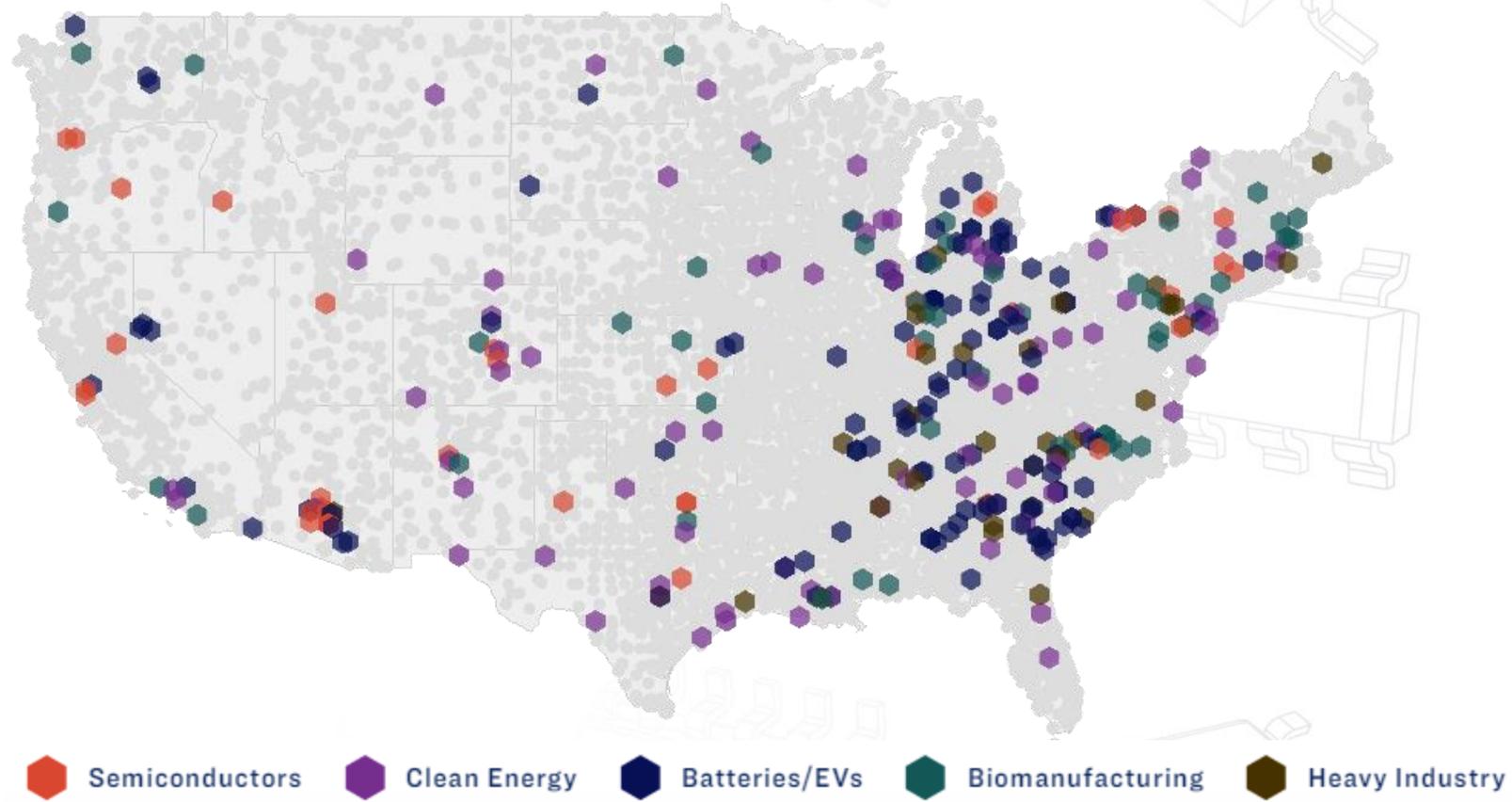
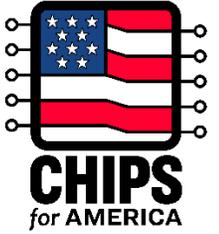


Future Innovation

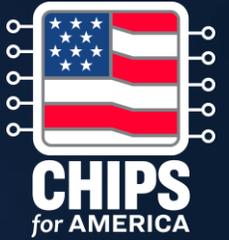
Chips are key to the technologies and industries of the future, so we need to be at the forefront. This act will ensure long-term U.S. leadership in the sector.

Manufacturing the Future

Under the Biden-Harris Administration, private companies have announced \$500 billion in manufacturing, and over \$231 billion in semiconductor manufacturing.

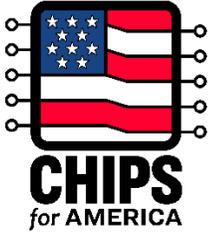


Source: invest.gov; last updated September 26, 2023

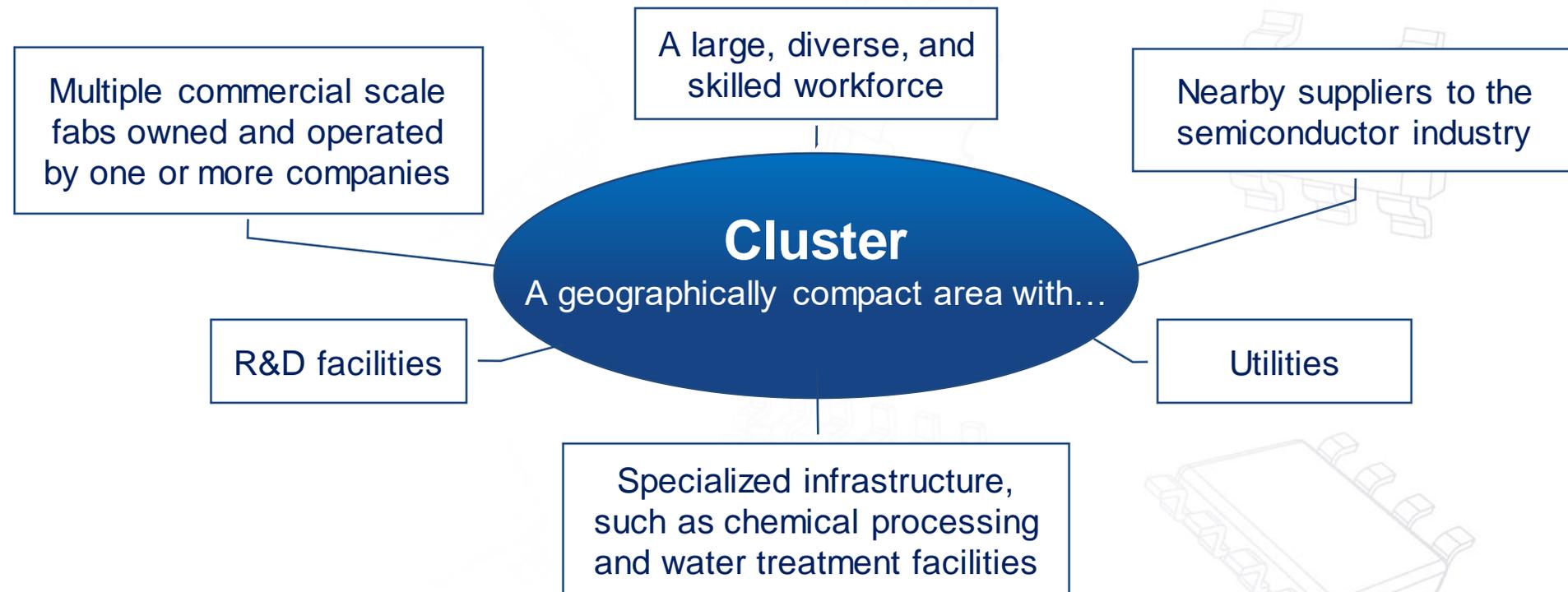


CHIPS Cluster Vision and the Role of States

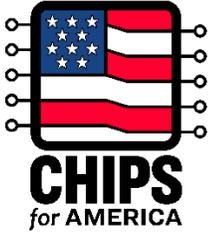
Regional clusters as the foundation for a competitive industry



By end of decade, United States will have **at least two new large-scale clusters** of leading-edge logic fabs. Each leading-edge cluster will have the **scale, infrastructure, and other competitive advantages** required to ensure that chipmakers view **continued expansion in the United States** as economically attractive and core to their business models, even in the absence of future funding from the CHIPS Program.

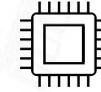


CHIPS vision for success calls for vibrant regional clusters



Strengthen Supply Chain Resilience

- ✓ The **U.S. and its allies** will reduce **chokepoint risks** flowing from **geographic concentration**
- ✓ Supply chain participants will improve the **transparency of demand and supply** to **reduce the risks of production disruptions**



Advance U.S. Technology Leadership

- ✓ The U.S. will have **incentivized major U.S. equipment and materials suppliers** to **increase their footprints** in the U.S.
- ✓ **Non-U.S. suppliers** of the world's most advanced equipment, materials, and subsystems will also **establish large-scale footprints** in the U.S.

By the
end of the
decade...



Support Vibrant U.S. Fab Clusters

- ✓ Each **CHIPS-funded fab cluster** in the U.S. will be **supported by dozens of suppliers**, including many **investing in the U.S. for the first time**
- ✓ **State and local entities** encouraged to help **facilitate the expansion of these ecosystems**

States can convene and support cluster ecosystems



Local coordination is critical



Cluster governance and communication



Local resource mobilization

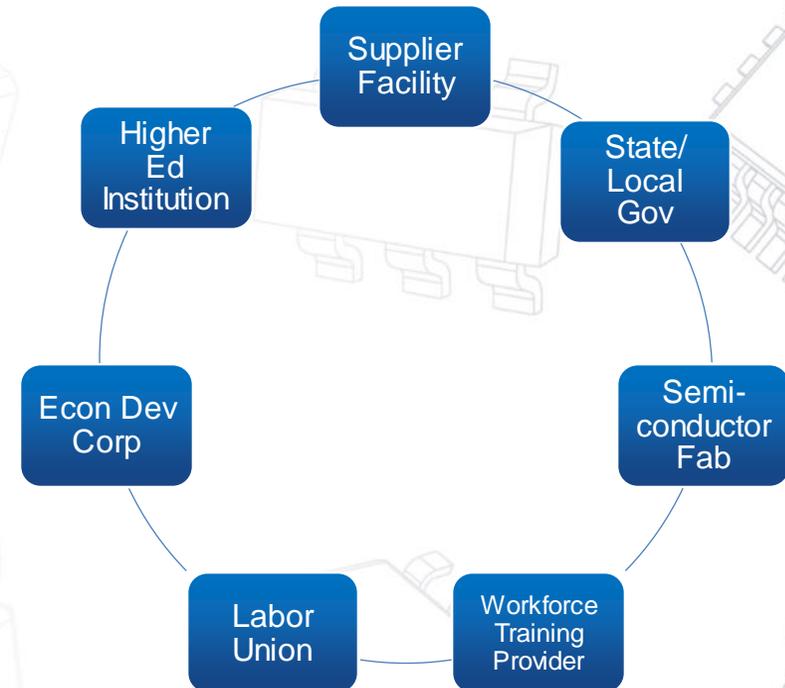


Regional planning



Convene across broad cluster topics including permitting, infrastructure, housing, transit, research, startups, sustainability, workforce, childcare

Local cluster partners could include:



How can states support the CHIPS for America vision?



Attracting or facilitating expansion of manufacturing facilities, including materials and equipment

Incentives



Supporting infrastructure, permitting, monitoring needs



Ecosystem

Workforce Development

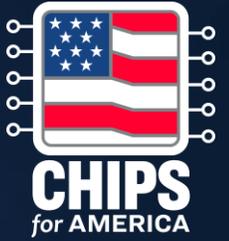


Investing in workforce development at all levels of the semiconductor industry

Investing in R&D and innovation to aid in developing the future technology of the industry

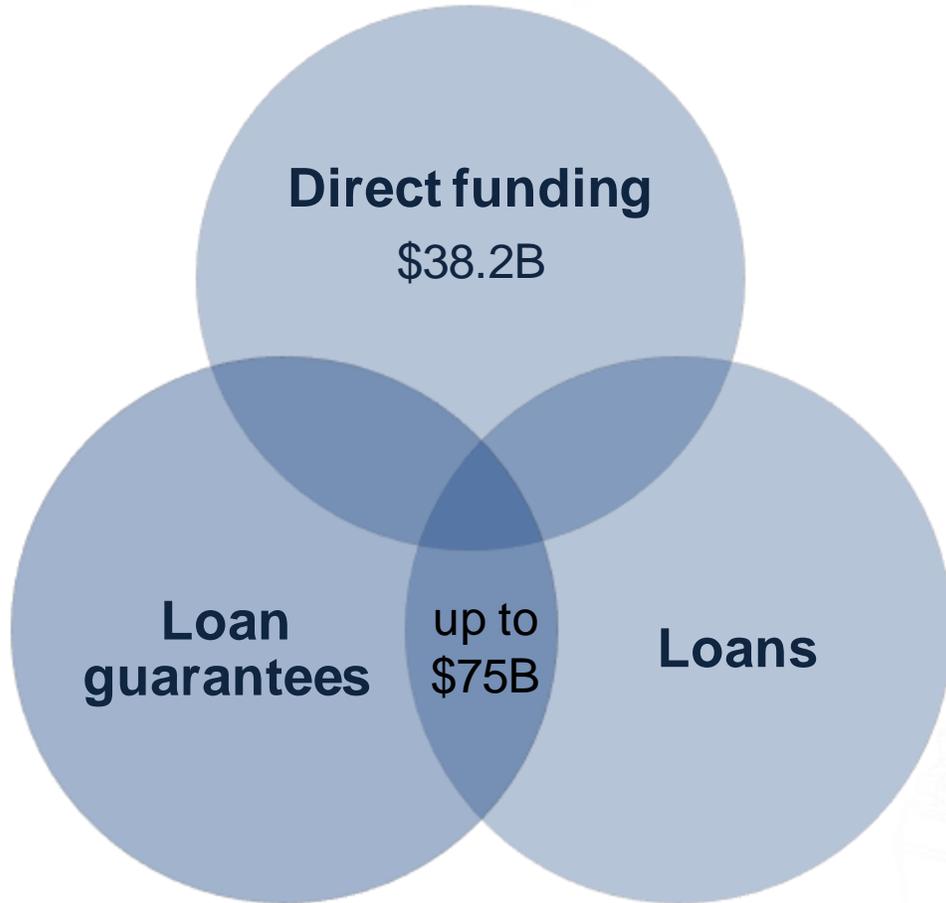
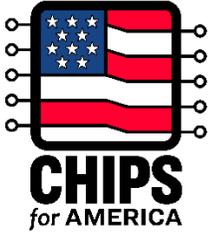
R&D and Innovation





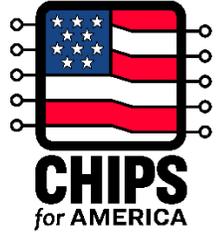
Covered Incentives

CHIPS Incentives Funding Instruments



Alternate funding sources:

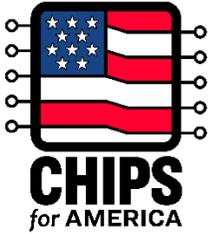
- Private Investments
- Investment Tax Credit (26 U.S.C. § 48D)
- State & Local Incentives



The CHIPS for America statute requires that applicants demonstrate they have secured incentives from state or local government

- **An eligible entity must have been offered a covered incentive from a state or local jurisdiction where the project is located, for the purposes of construction, expansion, or modernization of the facility.**
- Examples of this can be:
 - ✓ Concessions related to real property
 - ✓ Workforce pipeline and technical training investments
 - ✓ Funding for research and development with respect to semiconductors
 - ✓ Investments in industrial infrastructure that specifically support the proposed project, but that also could support broader development of a supplier ecosystem such as shared utility, logistics, and production capacity

States and municipalities could show this commitment in various ways

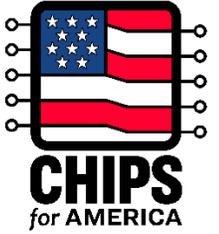


Factors for States to consider:

- Financial incentive packages are encouraged to create the potential for large spillover benefits
- Incentives or actions that can help projects move quickly
- Find ways to boost regional and local economy gains and semiconductor ecosystem rather than just a single company
- Incentives or actions that reduce project risk
- Incentives or actions that promote regional cooperation—e.g., through expedited processes, single-window liaisons, and project integration

- **Financial investments:** Support industrial infrastructure that may aid a specific project but could support broader development of a supplier ecosystem such as shared utility, logistics, and production capacity
- **Permitting:** Expedited processes for environmental, health, and safety reviews and permits.
- **Liaisons:** Point of contact to assist with site selection, supplier discovery, and compliance with local laws.
- **Workforce Training:** Fund programs to ensure broad talent pipelines.
- **Integration:** A systems integrator that works with ecosystem companies to address shared issues like navigating permits, building infrastructure, finding workers, and coordinating incentive applications.
- **Cooperation:** Planning and support for other ancillary investments such as housing and community development.
- **Collaboration:** Where relevant, partnership with other states and localities to develop regional ecosystems and corridors that encompass multiple jurisdictions.

Since August 2022, states have passed their own "CHIPS" legislation, bolstering state incentives to help attract semiconductor investments and support an ecosystem.



Permitting and Site Selection

Tax Incentives

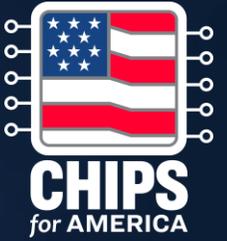
Incentives to Ecosystem Partners



R&D Funding

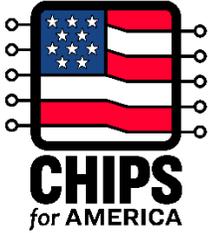
Workforce-related Incentives

Industrial Land Planning and Infrastructure Investments



Other State Opportunities

States will be critical partners in meeting the CHIPS for America semiconductor workforce vision



Over the next decade...

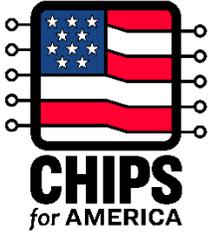
Double the U.S. semiconductor workforce overall.

Triple the number of graduates in semiconductor-related fields, including engineering.

Train 100,000 new technicians through apprenticeships, career and technical education, and career pathway programs.

Expand recruitment for **more people from underserved communities** – including women and veterans – to launch semiconductor industry careers.

Hire and **train an additional million women in construction** to meet the demand across a range of industries, including CHIPS projects.



Since the passage of the CHIPS and Science Act, at least seven states have announced new funding to support semiconductor workforce development, including:

Community college expansion

Instruction & equipment

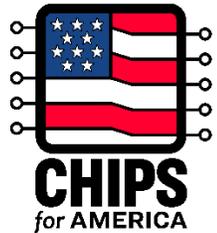
Curriculum development

Tuition assistance

Registered Apprenticeships

Matching funds

Workforce development to support a facility is an eligible use of funds for manufacturing incentives funds. In addition, workforce development has been named as one of the top three priorities for the National Semiconductor Technology. Over fifty community colleges in over 19 states have announced new or expanded programming to support semiconductor opportunities.



New state investments in infrastructure development are also facilitating cluster development, including:

Grid resilience and energy sustainability, including renewables

Roads, transportation, and transit

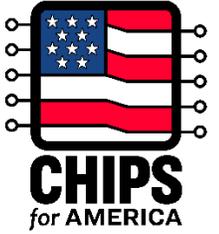
Site development / site preparation funds

Housing and zoning

Water and wastewater

Fab projects bring significant industrial infrastructure needs (such as upgraded power grids, gas lines, and water treatment facilities) and other local infrastructure needs, such as housing and community amenities. State investments in these areas can contribute to building U.S. strength and competitive advantage in the industry.

States can contribute to strengthening domestic supply chain resilience



Address key vulnerabilities

- States can attract continued investment to fill critical gaps in the ecosystem, including advanced materials and manufacturing equipment

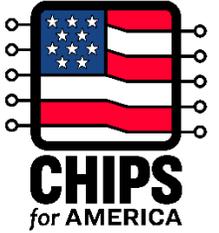
Acclimate foreign firms new to business in the U.S.

- States can facilitate access to services, shared facilities and infrastructure, and guide critical suppliers through complexities of permitting or finding new customers

Create inclusive business opportunities

- States can work with partners to identify and engage with small, minority-owned, veteran-owned, and women-owned businesses and help these firms leverage the opportunity created by CHIPS

Some states are supporting the semiconductor innovation ecosystem



1

Investments in research and development

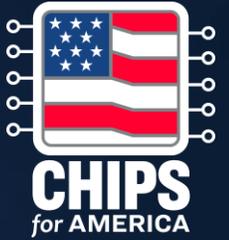
2

Start-up incubators and accelerators that can advance next-generation technologies

3

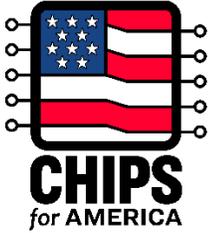
Innovation centers, cleanrooms, and other facilities

States can enable continuous interplay among universities, R&D facilities, startups, and manufacturing upgrades.



Program Update and Next Steps

Funding Opportunities



February 28, 2023

For commercial leading-edge, current, and mature node fabrication facilities

June 23, 2023

For large semiconductor materials and equipment facility projects \$300M+

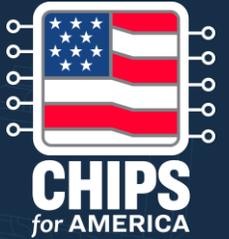
September 29, 2023

For smaller semiconductor materials and equipment facility projects under \$300M

To support the construction of semiconductor R&D facilities

The CHIPS Program Office has received over 530 statements of interest and more than 130 pre-applications and full applications

CHIPS Small Supplier Opportunity Strongly Encourages Consortia



What does a strong consortium look like?

- At least **2 suppliers**
- A state or local **government entity**
- An **anchor institution**
- May also contain workforce training providers, labor unions, econ dev corps, higher ed, and more**
- Does **not require** an umbrella organization or formal legal structure

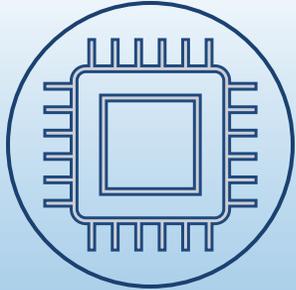
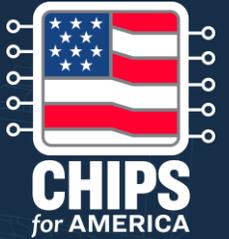
Benefits

- ✓ We generally expect **applicants applying as part of consortia to be better positioned** to meaningfully contribute to the development or sustainability of a cluster.
- ✓ Applicants can **work together to satisfy certain requirements**
- ✓ Achieve greater **economies of scale, efficiency, and effectiveness**
- ✓ Take advantage of the **shared skills and resources**

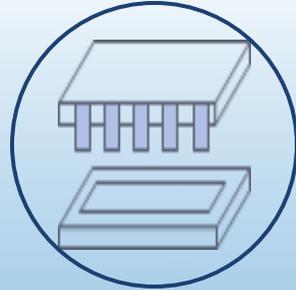
Example: Science Park

- Land
- Shared Utilities and Infrastructure
- Streamlined Permitting
- Incentives for Suppliers

CHIPS for America R&D



**National
Semiconductor
Technology Center**



**National Advanced
Packaging
Manufacturing
Program**

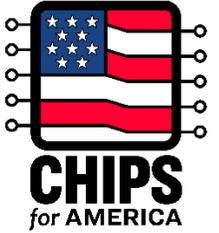


**Manufacturing
USA institutes**



Metrology

WORKFORCE



Next Steps

- Visit [CHIPS.gov](https://www.chips.gov) for resources, including:
 - Notice of Funding Opportunity
 - Vision for Success papers and Implementation Strategies
 - Applicant guides and templates
 - FAQs and fact sheets
 - Webinar schedule (and slides/recordings of prior webinars)
- Teaming Partner List
- Join our mailing list
- Contact us
 - askchips@chips.gov – general inquiries
 - apply@chips.gov – application-related inquiries